BUDGET Budget: attachment 6
Real-time Groundwater Level Monitoring Network

The main budget is presented in Table 2. District labor was estimated using estimates of days to completion and the costs for each day. The budget for hardware was based on the individual cost of each station, as constructed by the District previously and described in table 3. The cost of creation of the publicly accessible website, with secure data network connections to the District SCADA system, was based on submission of a draft scope of work and contract from a local engineering consultant specializing in web and map based database development.

Table 2. Main Project Budget

Budget Category	Non-State Share* (Funding Match)	Requested Grant Funding	Total
Task 1. Installation of approximately ten additional (16 total) real-time groundwater			
Review and refinement of site selection criteria	$3,000		$3,000
Evaluate and prepare budgets for wells	$2,000		$2,000
Prepare and manage well owner agreements	$5,500		$5,500
Enroll selected wells into the project	$8,000		$8,000
Procure hardware for installation		$75,970	$75,970
Install and configure hardware for remote groundwater level sensing		$60,000	$60,000
Commission site including manual quality control procedures		$20,000	$20,000
Configure SCADA software to accept and display incoming data		$15,000	$15,000
Task 2. Establishment of a publicly accessible web-site that will allow for real-time posting of data.			
Define technical requirements of desired website (including the ability to "push" data from a secure SCADA environment, to a public access environment)		$2,500	$2,500
Refine and sign contract with website developer		$1,000	$1,000
Work with contractor to develop the new website		$40,180	$40,180
Commission new website		$2,000	$2,000
Prepare a final website development report		$4,000	$4,000
Task 3. Analysis and establishment of an appropriate "multi-station groundwater level index".			
Bi-monthly, formally document observations (such as charging up of the canal system, groundwater pumping in near proximity to site locations, and winter flows in Cache Creek).	$3,500	$5,000	$8,500
Host a "data review" meeting to review District staff's findings and observations	$2,000	$4,000	$6,000
Development of algorithm for "multi-station groundwater level index".	$8,000	$10,000	$18,000
			Grand Total
Total (Sum the rows for each column)	$32,000	$239,650	$271,650

*Consists of local, federal, and value of in-kind service; this value should correspond to the BMS values under Applicant Information and Question's Tab, Budget (BMS fields require a breakdown of non-state share costs, if applicable).

Table 3. Hardware costs for an individual real-time groundwater level monitoring station.

Item Description	Quantity	Price	Extended
SCADAPack 350	1	$1,600	$1,600
Radio Mast Parts	1	$150	$150
4.9 GHz Radio	1	$500	$500
Radio POE Module	1	$40	$40
POE Power Plug	1	$5	$5
Outdoor Cat-5	25	$1	$25
Disconnect Terminal Block	10	$8	$82
Terminal Block	10	$4	$40
Grounding Terminal Block	5	$7	$35
1.25" Fuse Block	5	$9	$46
Larger Fuse Bock	2	$10	$20
End Bracket Block	4	$2	$8
Control Relays DPDT 12VDC	2	$20	$40
Control Relay Bases	2	$10	$20
Control Relay RC Surge Suppressor	2	$8	$16
DIN Rail	1	$10	$10
Wire Ducting	1	$50	$50
Panel Wire	1	$50	$50
Pole with base	1	$150	$150
Panel 24"x20"	1	$75	$75
Enclosure 24"x20"x8"	1	$600	$600
Enclosure 6"x6"x4"	1	$55	$55
Surge Supressor	1	$175	$175
Water Level Sensor	1	$600	$600
140 Watt Solar Panel	1	$650	$650
Solar Panel Mount	1	$305	$305
Solar Charge Controller	1	$175	$175
108 Amp Hr Battery	1	$300	$300
Ground Rod	1	$20	$20
Ground Rod Clamp	1	$10	$10
Ground Wire Clamp	1	$5	$5
Ground Buss	1	$15	$15
Ground Wire	25	$1	$25
Conduit and Fittings	1	$200	$200
Hardaware Total			**$6,097**
Panel Fabrication (Sierra Controls)			**$1,500**
Total			**$7,597**